

Claims

1. A method in connection with an actuator (7) in connection with a fluid flow or fluid reservoir, in particular an actuator that is designed to be used in connection with a drainage pipe (8) for the production of oil and/or gas in an oil and/or gas reservoir,
characterised in that an osmotic cell (9) is used to operate the actuator (10) and is placed in the fluid flow, whereby the necessary force and motion for the actuator to drive or adjust a valve or inflow control device (10) are achieved by utilising the osmotic pressure difference between the solution in the cell (9) and the external fluid flow/reservoir in relation to the cell.
2. A method in accordance with claim 1,
characterised in that a water/salt solution is used as the solution in the cell.
3. A method in accordance with claims 1 and 2,
characterised in that the actuator (7) is used to operate a valve (13, 7) that regulates the inflow of fluid through inflow openings in the drainage pipe (8).
4. An actuator device (7) in connection with a fluid flow, in particular an actuator that is designed to be used in connection with a drainage pipe (8) for the production of oil and/or gas in an oil and/or gas reservoir,
characterised in that the actuator (10) comprises an osmotic cell (9) that is designed to be placed in the fluid flow, whereby the necessary force and motion for the actuator (10) to drive or adjust a valve or inflow control device are achieved by utilising the osmotic pressure difference between the solution in the cell (9) and the external fluid flow/reservoir in relation to the cell.
5. A device in accordance with claim 4,
characterised in that the solution in the cell is a water/salt solution.

6. A device in accordance with claims 4 and 5,
characterised in that the actuator (10) is an integrated part of a valve
or inflow control device whereby the cell (9) is arranged in a housing (7) that is
fastened to the wall inside the drainage pipe (8) in connection with a hole (11) in
5 the pipe wall, whereby fluid from the formation outside the drainage pipe is
designed to flow through the hole(s) (11), on through the housing (7) and out
through openings (12) in it, and a valve plate (13) is designed to close or open the
openings (12) by means of the cell (9).
- 10 7. A device in accordance with claim 6,
characterised in that the valve plate (13) is designed to be moved by
means of a flexible membrane (5) that makes up all or part of one wall of the cell
(9).
- 15 8. A device in accordance with claim 6,
characterised in that the valve plate (13) is designed to be moved by
a piston and the cell consists of a piston/cylinder arrangement in which one wall is
designed as a moving piston in the cell housing.
- 20 9. A device in accordance with the previous claims 5-8,
characterised in that salt blocks (16) are provided inside the cell.